A LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Original) An image data correction method for a plasma display panel, which includes a plurality of address electrodes, and a plurality of scan and sustain electrodes arranged alternately and in pairs, the image data correction method comprising:

(a) calculating a load factor of video signals;

(b) determining an automatic power control level corresponding to the load factor, and generating sustain pulse information and the number of subfields; and

(c) selecting a correction table from a memory according to the number of subfields and the automatic power control level, and correcting image data.

2. (Original) The image data correction method as claimed in claim 1, wherein the step (c) comprises outputting correction data from two correction tables constituting an interval including the automatic power control level of input image data by linear interpolation.

3. (Original) The image data correction method as claimed in claim 1, wherein the correction data is based on stored experimental data.

4. (Original) An image data correction apparatus for a plasma display panel, which includes a plurality of address electrodes, and a plurality of scan and sustain electrodes arranged alternately and in pairs, the image data correction apparatus comprising:

an average signal level calculator for calculating an average signal level of externally input video signals to output a load factor;

an automatic power controller generating sustain pulse information and the number of subfields corresponding to the load factor;

a subfield generator for generating subfield data corresponding to each image data for each of the number of subfields output from the automatic power controller; and

an image data corrector for receiving the number of subfields fed back from the automatic power controller, correcting image data with reference to a correction table corresponding to the number of subfields, and outputting the corrected image data to the automatic power controller.

5. (Original) The image data correction apparatus as claimed in claim 4, wherein the image data corrector comprises:

a memory for storing correction data for gray scale data of the video signals based on subfields; and

a table selector for selecting a correction table to output correction data for the input image data with reference to the correction table.

6. (Original) The image data correction apparatus as claimed in claim 4, wherein the image data corrector comprises:

a memory for storing a defined number of correction tables storing correction data for gray scale data of an automatic power control level, wherein a defined number of automatic power control levels are present for each subfield;

a table selector which selects a group of correction tables corresponding to the input image data according to the number of subfields;

an automatic power control interval discriminator which determines an interval corresponding to the automatic power control level from the selected group of correction tables, and-selecting two correction tables including the corresponding interval; and

a linear interpolator which calculates correction data for the corresponding image gray scale data included in the interval by a linear interpolation operation from the two correction tables forming one interval determined by the automatic power control interval discriminator.

7. (Original) A plasma display panel device comprising:

a plasma display panel including a plurality of address electrodes, and a plurality of scan and sustain electrodes arranged alternately and in pairs;

a controller for calculating a load factor of externally input video signals, generating sustain pulse information and a number of subfields corresponding to the load factor, and selecting a correction table corresponding to the number of subfields to output corrected video signals data;

an address data generator which generates address data corresponding to the corrected data output from the controller, and applying the generated address data to the address electrodes of the plasma display panel; and

a sustain/scan pulse generator which generates sustain/scan pulses corresponding to the sustain pulse information output from the controller, and applying the generated sustain/scan pulses to the sustain/scan electrodes.

8. (Original) The plasma display panel device as claimed in claim 7, wherein the controller comprises:

an average signal level calculator which calculates an average signal level of externally input video signals to output a load factor;

an automatic power controller which generates sustain pulse information and the number of subfields corresponding to the load factor;

a subfield generator which generates subfield data corresponding to each image data for the number of subfields output from the automatic power controller; and

an image data corrector for receiving the number of subfields from the automatic power controller, correcting image data with reference to a correction table corresponding to the number of subfields, and outputting the corrected image data to the automatic power controller.

9. (Original) The plasma display panel device as claimed in claim 8, wherein the image data corrector comprises:

a memory for storing correction data for gray scale data of the video signals by subfields; and

a table selector for selecting a correction table to output correction data for the input image data with reference to the correction table.

10. (Original) The plasma display panel device as claimed in claim 8, wherein the image data corrector comprises:

a memory for storing a defined number of correction tables storing correction data for gray scale data of an automatic power control level, wherein a defined number of automatic power control levels are present for each subfield;

a table selector for selecting a group of correction tables corresponding to the input image data according to the number of subfields;

an automatic power control interval discriminator for determining an interval corresponding to the automatic power control level from the selected group of correction tables, and selecting two correction tables including the corresponding interval; and

a linear interpolator which calculates correction data for the corresponding image gray scale data included in the interval by a linear interpolation operation from the two correction tables forming one interval determined by the automatic power control interval discriminator.